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09/497,618	02/03/2000	Rainald Sander	POo,0184	7717

7590

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EXAMINER

FARAHANI, DANA

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/497,618

Applicant(s)

SANDER, RAINAL

Examiner

Dana Farahani

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the adjacency of signal line of the temperature sensor and charge carrier detector must be shown or the feature cancelled from claim 6. No new matter should be entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "proximate a hottest location", line 2, renders the claim indefinite. It is unclear as to what proximate a hottest location means.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4, 6-8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi.

Regarding claim 1, in figures 3 and 4, Yamaguchi discloses a semiconductor device, 4A, and a MOS transistor 13 in parallel with the temperature sensing circuit 20, same circuit neutralizing the accumulated charge, in an N type body substrate 1.

Regarding claim 2, Yamaguchi discloses the diodes for neutralizing the accumulated charge and sensing the temperature, and the MOS transistor component in the semiconductor body. Note figure 3, number 13 and 20.

Regarding claim 4, Yamaguchi discloses the pair of adjacent diodes 20, for sensing the temperature and for the accumulated charge, 21 and 22 of figure 4A.

Regarding claim 6, Yamaguchi discloses a temperature signal produced by circuit 20, figure 4B, to be provided to the FET control signal, which consequently turns off the FET 13. The charge carrier neutralizing diode 22 is adjacent to the temperature signal.

Regarding claim 8, Yamaguchi discloses thyristor 20 as a temperature sensor.

Regarding claim 9, Yamaguchi discloses an N+ type silicon body substrate, paragraph 1 line 7.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi as applied to claims 1, 2, 4-6, 8 and 9, above, and further in view of Roth.

It is well known in the art that an exclusive-or logic gate outputs 1, or H, when one of its inputs is 0, or L, and the other input is 1, or H. (see, for example, Roth, page 51). Therefore it would have been obvious to one of ordinary skills in the art at the time the invention was made to use an exclusive-or logic gate in Yamaguchi to get an output signal corresponding to the temperature and charge carrier input signals.

### ***Response to Arguments***

8. Applicant's arguments filed on 3/11/02 regarding the drawings objection and the rejection under 35 U.S.C. 112, second paragraph, are persuasive, and therefore, the objection and the rejection are withdrawn.

9. Applicant's arguments filed on 3/11/02 regarding the rejections under 35 U.S.C. 102(b) and 103(a) have been fully considered but they are not persuasive.

The applicant argues that Yamaguchi reference does not teach a device that produces the two signals of the disclosed claimed invention. This is not persuasive, since it is an inherent function of MOS transistor 13 to create a signal in the event of free charge carrier occurrence. Furthermore, temperature sensor 20 will generate a second signal.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

This action is made **NON-FINAL**. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (703)305-1914. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703)306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Dana Farahani  
May 21, 2002

*Olik Chaudhuri*  
Olik Chaudhuri  
Supervisor  
Art Unit 2814  
May 21, 2002